



Life-Cycle Sustainment Plan Annotated Outline

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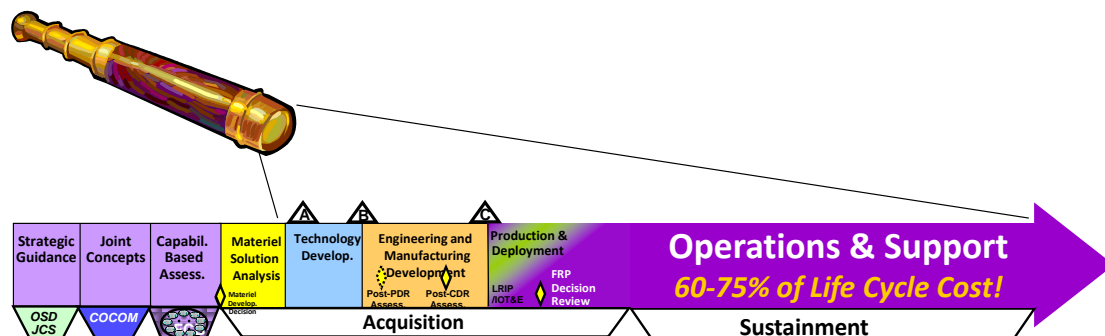
3 November 2011



Overview

- ❑ LCSP Background and Perspective
- ❑ Outline and Expectations
- ❑ LCSP Phase Emphasis
- ❑ LCSP and RFPs
- ❑ Next Steps
- ❑ Conclusion

He Who Fails To Plan, Plans To Fail





LCSP...an introduction

❑ LCSP Facts

- The Life-cycle Sustainment Plan (LCSP) is the **program's primary management tool** to satisfy the Warfigher's **sustainment requirements** through the delivery of a **product support package***.
- **Separated** from Acquisition Strategy
- Annotated outline released
 - **Required for all programs**
 - Approval for ACAT ID through ASD(L&MR)

❑ Key document for:

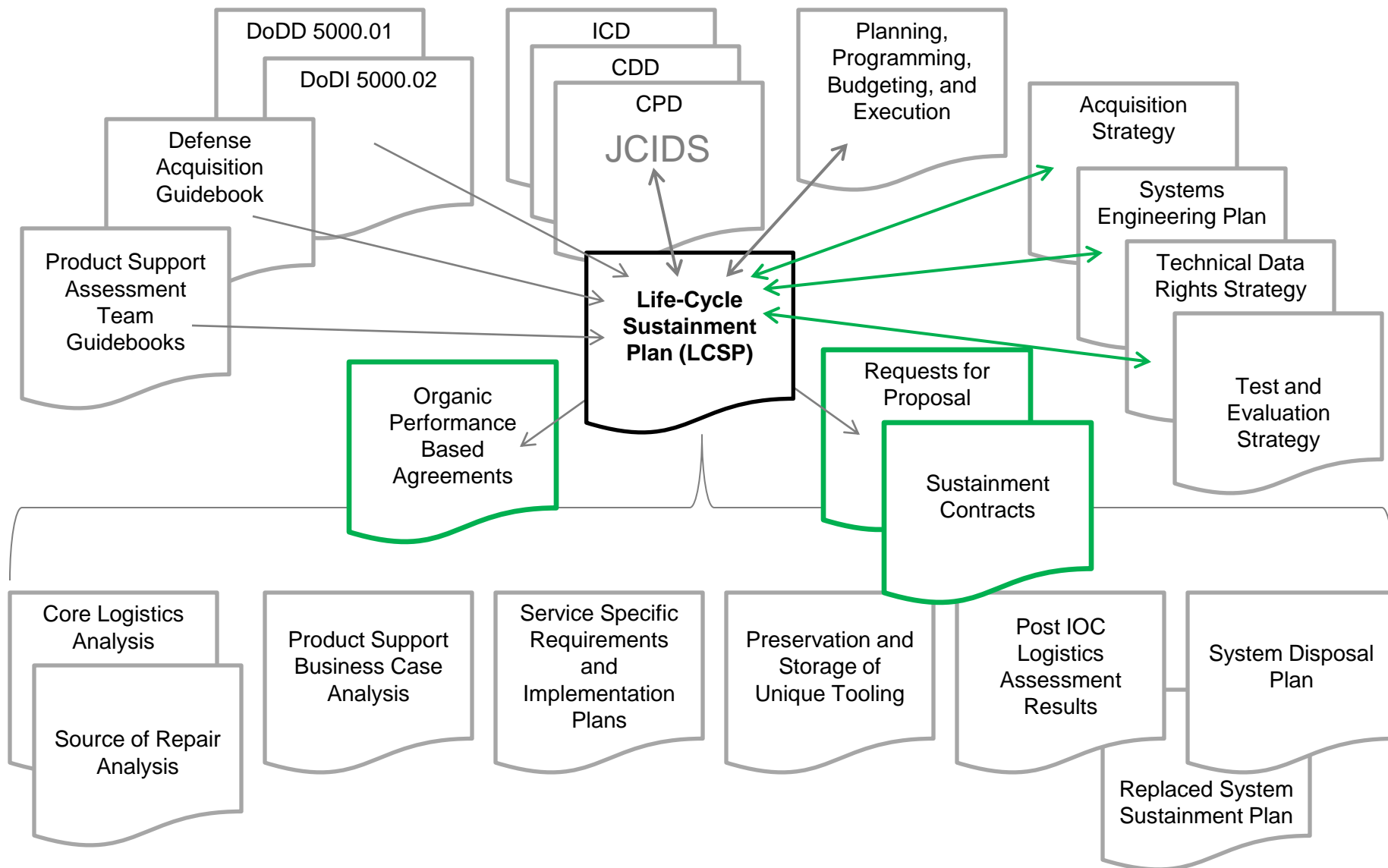
- Programs
- Milestone decision authorities
- Oversight and policy roles

In today's tight budget climate, the LCSP facilitates cross-functional alignment among acquisition and sustainment stakeholders to deliver affordable systems

*The logistics elements and any sustainment process contracts/agreements to attain and sustain the maintenance and support needed for materiel availability..."sustainment" and "product support" are synonymous

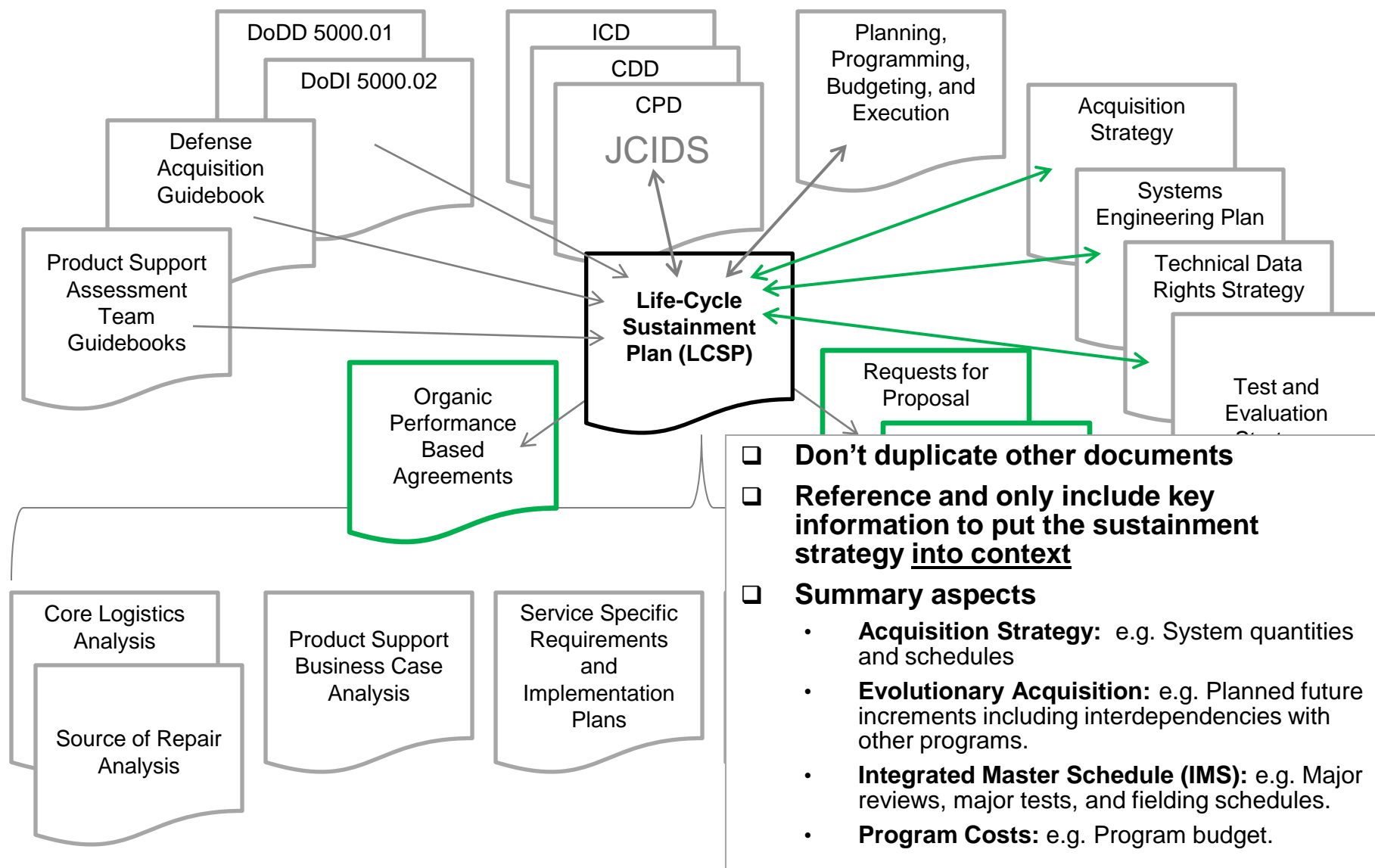


The LCSP is the nexus of critical thinking to deliver affordable life-cycle product support





The LCSP is the nexus of critical thinking to deliver affordable life-cycle product support





Policy, Guidance, and Oversight model

Policy

DoDI 5000.02
Life-Cycle
Sustainment
Enclosure

Life-Cycle
Sustainment Plan
(LCSP) Outline

Guidance

Defense
Acquisition
Guidebook
(Chapter 5),
update underway

PSAT Guidebooks
▪ PSM
▪ BCA
▪ Log Assessments

Oversight

- Action Officer/Program Collaboration
- IIPT, OIPT, DAB decision support
- DAES, DAMIR, SARs

DASD (MR) engagement model

Program tool that
evolves throughout
the Lifecycle

Post IOC

Program Manager
Product Support Manager

Acquisition

Operations and Sustainment

MS A

MS B

MS C

FRP/ IOC

Acquisition Strategy and other Acquisition Management Docs

Life-Cycle Sustainment Plan, BCA, Log Assessments/Reviews

Planned Sustainment Performance

Continual review cycle

Actual Sustainment Performance



Key LCSP Questions

Answers



- ☐ What is the Product Support Strategy?
- ☐ How is the program implementing a Performance-Based Product Support Strategy?
- ☐ What metrics are used?
- ☐ How are the sustainment functions covered?
 - What type contract(s) will be used to procure the Product Support Package?
- ☐ Where is the program in implementation?
 - What's been done?
 - What's going to happen next?

Who

What

When

How



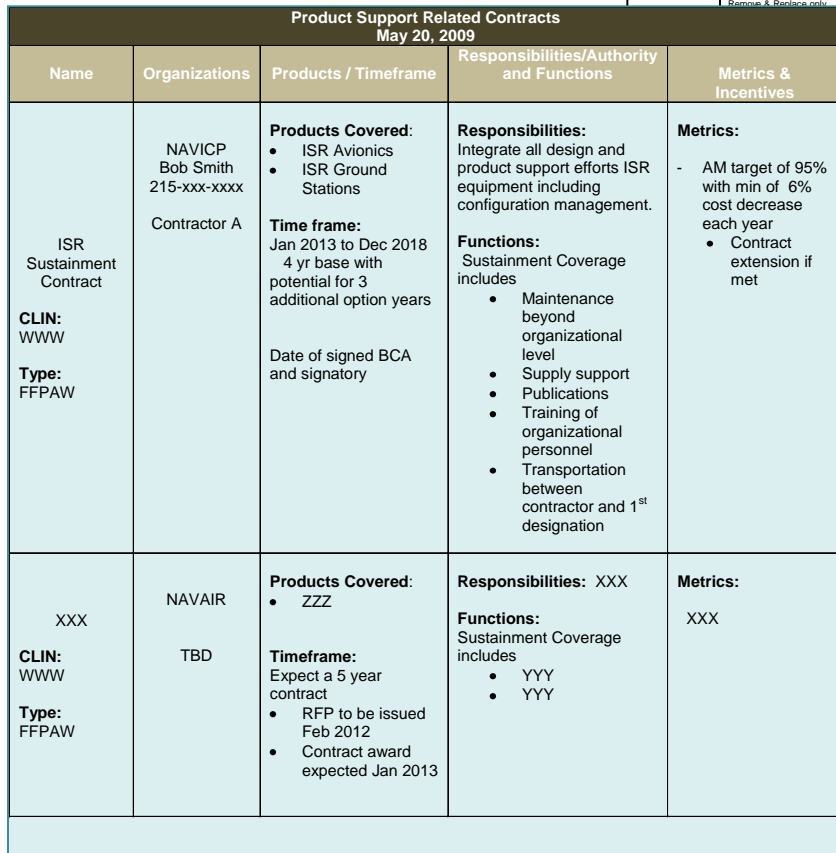
Key LCSP Purpose

The program's management tool to align and help integrate the product support stakeholders efforts for formulating, implementing, and executing the sustainment strategy

Both Teams Are Playing Football



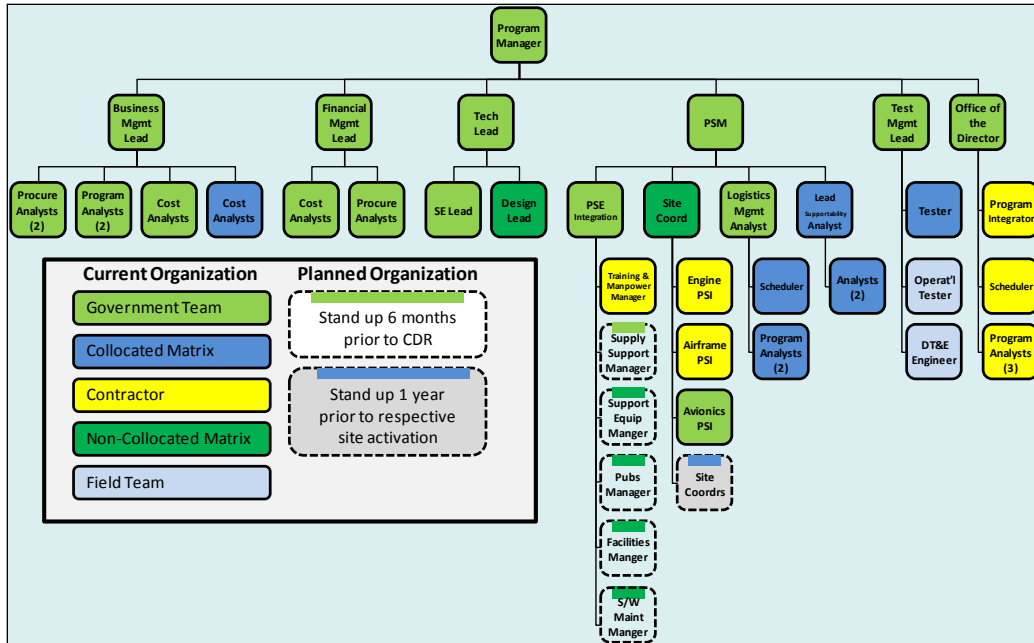
...but they are not playing the same game.



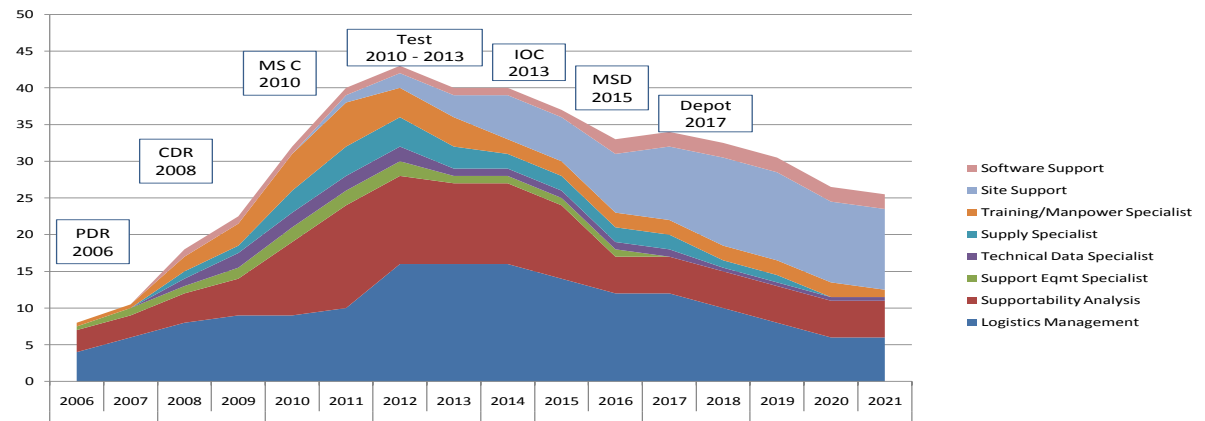
Sustainment Matrix																										
Sub-sys**		Data Rights	Function	Maintenance									Software Support/Maint		Supply Support		Transportation (PHS&T)		Supportability Analysis		Configuration Control *		Technical Data		Training	
				Level 1			Level 2			Level 3			O	C	O	C	O	C	O	C	O	C	O	C	O	C
				O-1	O-2	O-3	C	I-1	I-2	I-3	C	Depot	C	O	C	O	C	O	C	O	C	O	C	O	C	
Airframe		Unlimited	Servicing/Inspections	O	O	O										O		O		O		O		O		
			Corrosion Control/Treatment	O	O							N I														
			Repair	O	O			O	O	O		N I														
Power Plants Engine		Unlimited	Servicing/Inspections	O	O	O		O	O	O		N I			O		O		O		O		O			
			Assemble/Disassemble	O	O			O	O	O		N I														
			Repair					O				N I														
APU		Negotiated License Rights <i>Remove & Replace only</i>	Remove & Replace	O	O	O	P								A		TRANSOC	P- A		A		A		A		
			Repair & Overhaul				A				A		A													
			Inspections	O	O	O							ISR		ISR		ISR		ISR		ISR		ISR		ISR	
			Functional test & adjustments				ISR	ISR	ISR	ISR	ISR		ISR													
			Repair				ISR	ISR	ISR	ISR	ISR		ISR													
			Inspections	O	O	O						Tinker														
			Functional test & adjustments					O	O	O		Tinker														
			Repair					O		O		Tinker														
			Diagnostics Software											O												
			Inspections	O	O	O						Tinker			O		A	TRANSOC	P- A	O		O		O		
			Functional test & adjustments	O	O			O	O	O		Tinker														
			Repair	O	O			O	O	O		Tinker				P-TBD		P-TBD								
			Inspections	O	O	O						Tinker			O					O		O		O		
			Functional test & adjustments	O	O							Tinker														
			Repair	O	O			O	O			NI														
			Diagnostics Software									NI		O						O		O		O		
			Hardware					O	O																	
			Diagnostics Software												B											
			Hardware					O																		
* cost or availability drivers. Also expand as program moves towards MS C.																										
<div><div><div>Maint Level Codes</div><div>O-1: Ashore Squadrons & Aviation ships</div><div>O-2: OCONUS Detachments</div><div>O-3: Detachments aboard non-aviation ships</div><div>I-1: Major CONUS Ashore& Aviation Ships AMF A</div><div>I-2: Minor CONUS Ashore Sites</div><div>I-3: OCONUS AMDs</div><div>P</div><div>Full organic capabilities</div><div>Limited capabilities</div></div><div><div>Organizational Codes</div><div>NI NADEP North Island</div><div>Tinker Tinker - AMC Tinker</div><div>ISR ISR Contractor TBD</div><div>Contractor A Contractor A</div><div>Contractor B Contractor B</div><div>Contractor TBD Contractor TBD</div><div>Organic/Commercial Partnership</div></div><div>* Includes design and logistics management responsibilities</div></div>																										



A picture is worth a 1,000 words



Port Yearly Headcount Profile
(May 20, 2007 Estimate)



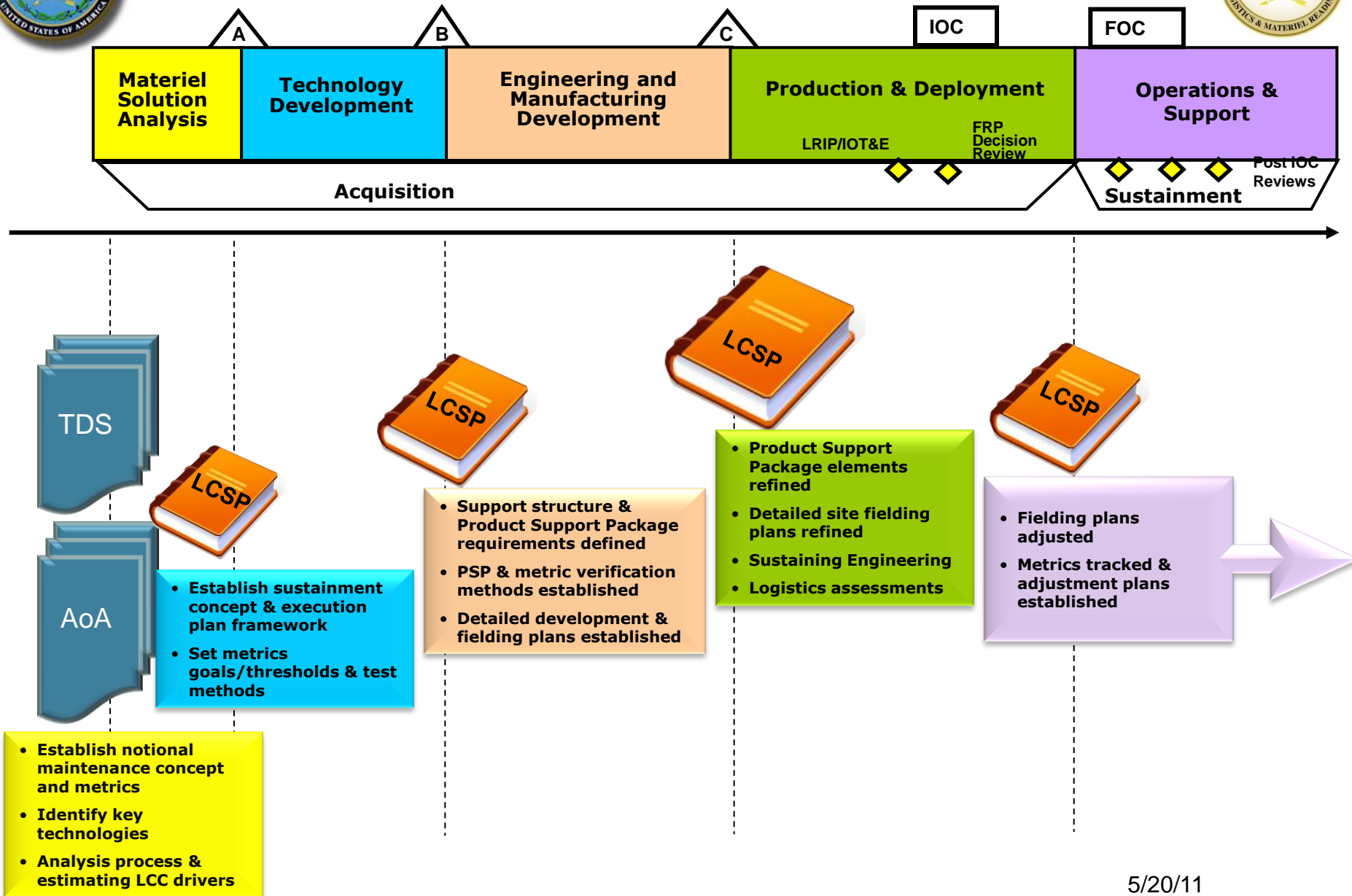


LCSP expectations

LCSP is...	LCSP is NOT...
<ul style="list-style-type: none">• It is the program's plan for fulfilling its product support strategy, which includes accomplishing policy and associated guidance• It focuses on <u>specifically how</u> the program will implement it<ul style="list-style-type: none">• Who will do what• When• How (specific tools/processes)• How much it will cost	<p>A rehash of policy or guidance</p>
<ul style="list-style-type: none">• It is the program's management tool for delivering the product support package which includes communicating the plan at all levels	<p>Assembled solely to satisfy a Milestone Decision Authority at a milestone review</p>
<ul style="list-style-type: none">• It is a living document describing the sustainment approach and resources necessary across the life cycle• The LCSP must document the <u>current</u> program plan relative to sustainment	<p>Static, a document that lives separately from the management reality of the program</p>



The LCSP Evolves



5/20/11



Overview

❑ LCSP Background and Perspective

❑ Outline and Expectations

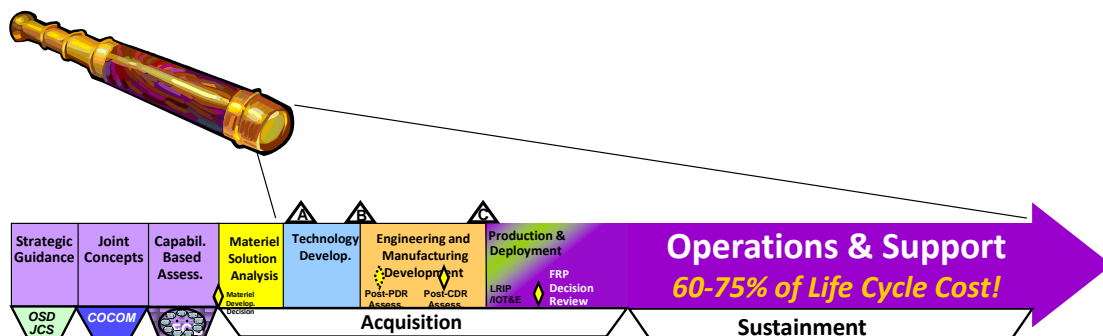
❑ LCSP Phase Emphasis

❑ LCSP and RFPs

❑ Next Steps

❑ Conclusion

He Who Fails To Plan, Plans To Fail





Outline and Expectations: LCSP Table of Contents

1. **Introduction**
Purpose, scope, focus and objective
2. **Product Support Performance**
Metrics, their values and how they will be measured over time
3. **Product Support Strategy**
Strategy (maintenance & supply chain) and what drives it (design, ops, supply chain)
4. **Product Support Arrangements**
Contracting strategy (Details on Sustainment related contracts expanding on Acquisition Strategy)
5. **Product Support Package Status**
Results from Logistics Assessments, Program & Design reviews (open issues)
6. **Regulatory/Statutory Requirements that Influence Sustainment Performance**
How being implemented
7. **Integrated Schedule**
Sustainment related events (major plans, Product Support Elements & site activations)
8. **Funding**
Product Support Elements & spending plans
9. **Management**
Organizational structure & staffing levels and management approach
10. **Supportability Analysis**
How design features being implemented/status, PSE determined the performance tracked
11. **Additional Sustainment Planning Factors**
Special topics related to sustainment

LCSP Annexes



LCSP Table of Contents: Introduction

1. Introduction

Purpose, scope, focus and objective

2. Product Support Performance

Metrics, their values and how they will be measured over time

- ☐ Scope
- ☐ Focus
- ☐ Objective
- ☐ Update process overview

6. Regulatory/Statutory Requirements that Influence Sustainment Performance

Revision Number	Date	Change and Rationale	Approved By
0.7	April 2008	Addressed results from CDR and changes in due to avionics reliability issues – see comments in xxx	APEO(L)
0.8	June 2008	Updated Section 10.2 with results from approved PBAs with NAVICP	NAVAIR (AIR-00)
0.9	October 2008	Addressed PS WIPT (including Service and OSD) comments – many changes – see Comment Resolution Matrix (CRM)	APEO(L)
Etc.			

LCSP Annexes



LCSP Table of Contents:

Product Support Performance and Strategy

1. Introduction

- Purpose, scope, focus and objective

2. Product Support Performance

Metrics, their values and how they will be measured over time

3. Product Support Strategy

Strategy (maintenance & supply chain) and what drives it (design, ops, supply chain)

2 Product Support Performance

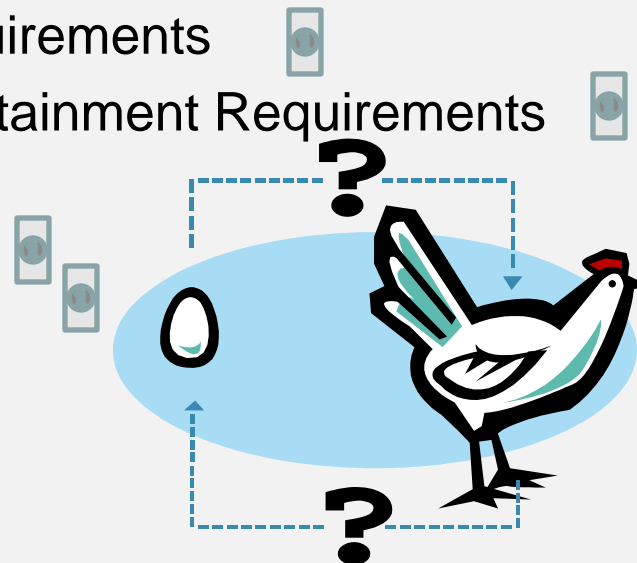
2.1 Sustainment Performance Requirements

2.2 Testing and Demonstrating Sustainment Requirements

3 Product Support Strategy

3.1 Strategy Considerations

3.2 Sustainment Relationships



11. Additional Sustainment Planning Factors

- Special topics related to sustainment

LCSP Annexes



LCSP Table of Contents:

Product Support Arrangements and Package Status



1. **Introduction**
 - Purpose, scope, focus and objective
2. **Product Support Performance**
 - Metrics, their values and how they will be measured over time
3. **Product Support Strategy**
 - Strategy (maintenance & supply chain) and what drives it (design, ops, supply chain)
4. **Product Support Arrangements**

Contracting strategy (Details on Sustainment related contracts expanding on Acquisition Strategy)
5. **Product Support Package Status**

Results from Logistics Assessments, Program & Design reviews (open issues)

4 Product Support Arrangements

- 4.1 Contracts
- 4.2 Performance Based Agreements



5 Product Support Package Status

- 5.1 Program Review Results
- 5.2 Logistics Assessment Results





LCSP Table of Contents: Regulatory/Statutory Requirements

1. **Introduction**
 - Purpose, scope, focus and objective
2. **Product Support Performance**
 - Metrics, their values and how they will be measured over time
3. **Product Support Strategy**
 - Strategy (maintenance & supply chain) and what drives it (design, ops, supply chain)
4. **Product Support Arrangements**
 - Contracting strategy (Details on Sustainment related contracts expanding on Acquisition Strategy)
5. **Product Support Package Status**
 - Results from Logistics Assessments, Program & Design reviews (open issues)
6. **Regulatory/Statutory Requirements that Influence Sustainment Performance**
 - How being implemented

Requirement	Documentation	OPR	Start / Implementation Date	CLIN	Review Cycle	Performance Metric
Core Logistics Analysis	10 USC 2464	AMCOM	MS-B, Sept 2013		Milestone C; FRPDR	Availability & O&S Cost
Source of Repair Analysis	Public Law 111-23	OPNAV/N4	MS-C, Nov 2014		As required	
Public-Private Partnership	10 USC 2474	HQ AFMC/A4	MS-B, Sep 2013		MS-C; Every 5 years after IOC	Availability KPP Reliability KSA
Corrosion	DODI 5000.67 (Feb 2010)	PSM/ Contractor	RFP, Sep 2011,	CLIN 008	MS-B MS-C Every 5 years after IOC	Availability KPP
IUID	DODI 5000.02 (Dec 08) DODI 8320.04 (Jun 08)	PSM/ Contractor	RFP, SEP 2011	CLIN 007	MS-B MS-C FRPDR	
CBM +	DODI 4151.22 (Dec 07)		RFP, SEP 2011			Availability KPP



LCSP Table of Contents: Integrated Schedule

1. Introduction

- Purpose, scope, focus

2. Product Support Performance

- Metrics, their values and trends

3. Product Support Strategy

- Strategy (maintenance, repair, etc.)

4. Product Support Arrangements

- Contracting strategy (P, S, etc.)

5. Product Support Packages

- Results from Logistics Support Analysis

6. Regulatory/Statutory Requirements

- How being implemented

7. Integrated Schedule

Sustainment related events (major plans, Product Support Elements & site activations)

8. Funding

- Product Support Elements & spending plans

9. Management

- Organizational structure & staffing levels and management approach

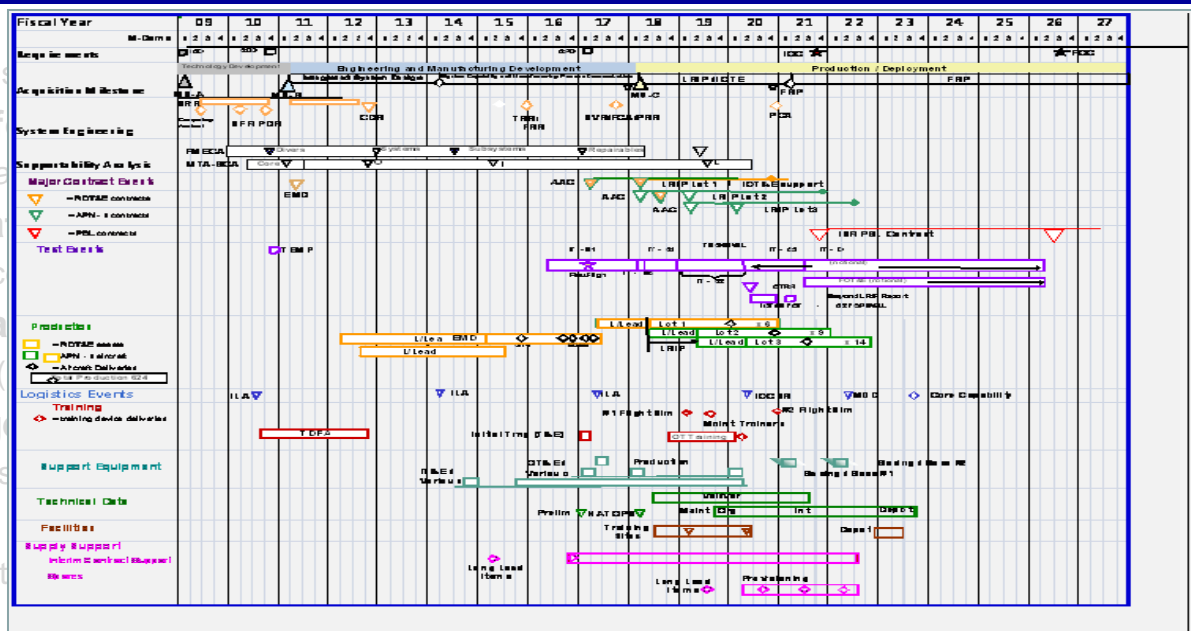
10. Supportability Analysis

- How design features being implemented/status, PSE determined the performance tracked

11. Additional Sustainment Planning Factors

- Special topics related to sustainment

LCSP Annexes





LCSP Table of Contents: Funding

1. Introduction

- Purpose, scope, focus and objective

2. Product Support Performance

- Metrics, their values and how they will be measured

3. Product Support Strategy

8 Funding

Sustainment related funding

- ☐ Required
- ☐ Funded

8. Funding

Product Support Elements & spending plans

9. Management

- Organizational structure & staffing levels and man

10. Supportability Analysis

- How design features being implemented/status, P

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LCSP Annexes

Template version PB12.6	Program Funding & Quantities											
(\$ in Millions / Then Year)	Prior	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY12-16	To Comp	Prog Total	
RD&E												
Prior \$ (PB 11)	106.4	6.7	8.3	17.2	7.1	0.0	0.0	0.0	24.3	0.0	145.7	
Current \$ (PB 12)	108.0	5.0	4.2	16.0	6.5	3.2	1.3	0.0	27.0	0.0	144.2	
Delta \$ (Current - Prior)	1.6	(1.7)	(4.1)	(1.2)	(0.6)	3.2	1.3	0.0	2.7	0.0	(1.5)	
Required \$	108.0	6.5	7.9	16.0	6.5	3.2	1.3	0.0	27.0	0.0	149.4	
Delta \$ (Current - Required)	0.0	(1.5) ¹	(3.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(5.2)	
PROCUREMENT												
Prior \$ (PB 11)	0.0	128.3	133.2	145.2	133.5	138.0	112.0	0.0	528.7	217.0	1,007.2	
Current \$ (PB 12)	0.0	89.6 ²	135.2	141.1	152.3 ³	155.4	121.0	93.0	662.8	145.0	1,032.6	
Delta \$ (Current - Prior)	0.0	(38.7)	2.0	(4.1)	18.8	17.4	9.0	93.0	134.1	(72.0)	25.4	
Required \$	0.0	94.0	134.2	141.1	152.3	155.4	121.0	93.0	662.8	145.0	1036.0	
Delta \$ (Current - Required)	0.0	(4.4) ⁴	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(3.4)	
MILCON												
Prior \$ (PB 11)	0.0	0.0	1.3	1.6	0.0	2.1	2.3	0.0	6.0	15.3	22.6	
Current \$ (PB 12)	0.0	0.0	1.4	1.7	0.0	2.0	2.1	3.0	8.8	12.6	22.8	
Delta \$ (Current - Prior)	0.0	0.0	0.1	0.1	0.0	(0.1)	(0.2)	3.0	2.8	(2.7)	0.2	
Required \$	0.0	0.0	1.4	1.7	0.0	2.0	2.1	3.0	8.8	12.6	22.8	
Delta \$ (Current - Required)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	
WEAPON SYSTEM O&M ¹												
Prior \$ (PB 11)	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0	12.0	88.0	100.0	
Current \$ (PB 12)	0.0	0.0	0.0	0.0	0.0	0.0	11.0	15.0	26.0	75.0	101.0	
Delta \$ (Current - Prior)	0.0	0.0	0.0	0.0	0.0	0.0	(1.0)	15.0	14.0	(13.0)	1.0	
Required \$	0.0	3.8	3.5	4.0	4.3	4.6	5.2	5.0	23.1	40.0	70.4	
Delta \$ (Current - Required)	0.0	(3.8)	(3.5)	(4.0)	(4.3) ⁵	(4.6)	5.8	10.0	2.9	35.0	30.6	
TOTAL												
Prior \$ (PB 11)	106.4	135.0	142.8	164.0	140.6	140.1	126.3	0.0	571.0	320.3	1275.5	
Current \$ (PB 12)	108.0	94.6	140.8	158.8	158.8	160.6	135.4	111.0	724.6	232.6	1300.6	
Delta \$ (Current - Prior)	1.6	(40.4)	(2.0)	(5.2)	18.2	20.5	9.1	111.0	153.6	(87.7)	25.1	
Required \$	108.0	104.3	147.0	162.8	163.1	165.2	129.6	101.0	721.7	197.6	1278.6	
Delta \$ (Current - Required)	0.0	(9.7)	(6.2)	(4.0)	(4.3)	(4.6)	5.8	10.0	2.9	35.0	22.0	
QUANTITIES ²												
Prior (PB 11)	0	552	575	681	587	602	634	656	3160	512	4,799	
Current (PB 12)	0	385	582	607	655	669	521	400	3819	980	4,799	
Delta \$ (Current - Prior)	0	(167)	7	(74)	68	67	(113)	(256)	(308)	(468)	0	
Required Qty	0	385	582	607	655	680	550	500	3959	840	4,799	
Delta Qty (Current - Required)	0	0	0	0	0	(11)	(29)	(100)	(140)	140	0	

¹ Product Support BCA Unfunded

² Initial Spares: (\$16M)

³ MIPR to PMA-260; \$16.4M Capital Investment Support Equipment Funding

⁴ Initial Spares: \$4.4M of \$16M requirement unfunded

⁵ ICS Funding Shortfall (FY13 and FY14)



LCSP Table of Contents: Management

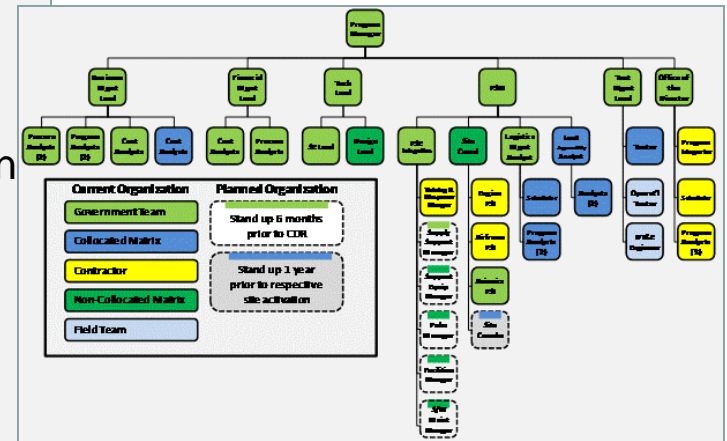
9 Management

9.1 Organization

- 9.1.1 Government Program Office Organization
- 9.1.2 Program Office Product Support Staffing Levels
- 9.1.3 Contractor(s) Program Office Organization
- 9.1.4 Product Support Team Organization

9.2 Management Approach

- 9.2.1 Product Support Manager Roles and Responsibilities
- 9.2.2 Sustainment Risk Management



inment Performance

nts & site activations



9. Management

Organizational structure & staffing levels and management approach

10. Supportability Analysis

- How design features being implemented/status, PSE determined the performance tracked

11. Additional Sustainment Planning Factors

- Special topics related to sustainment

LCSP Annexes



LCSP Table of Contents: Supportability Analysis

1. Introduction

Purpose, scope, focus and objective

10 Supportability Analysis

10.1 Design Interface

10.1.1 Design Analysis

10.1.2 Technical Reviews

10.2 Product Support Element Determination

10.3 Sustaining Engineering

- How being implemented

7. Integrated Schedule

- Sustainment related events (major plans, Product Support

8. Funding

- Product Support Elements & spending plans

9. Management

- Organizational structure & staffing levels and management

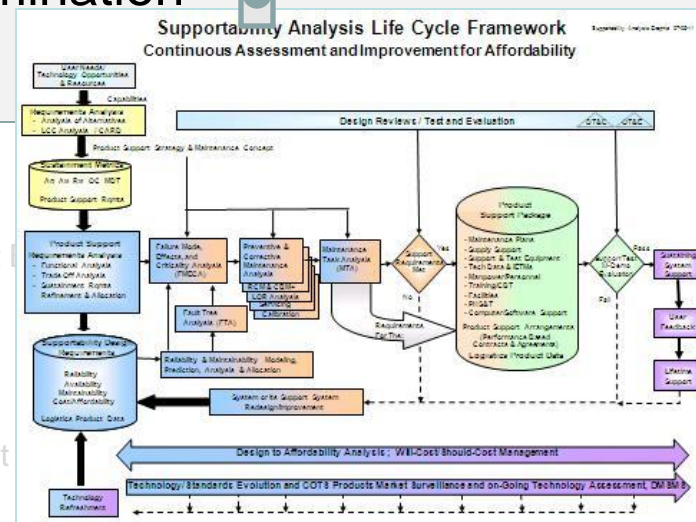
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LCSP Annexes





LCSP Table of Contents: Additional Sustainment Planning Factors

1. Introduction

- Purpose, scope, focus and objective

11 Additional Sustainment Planning Factors

Additional sustainment issues or risks cutting across functional lines not included elsewhere in the LCSP. For example:

- Critical Program Information elements provided in the Program Protection Plan (maintaining anti-tamper on component or sub-components)
- Materials with environmental impacts addressed in the PESHE (e.g. require special handling, facilities, training)
- System integration with or onto another platform (e.g. vehicles onto transport ships/RoRos, air transports, etc.)
- Integration of C4I with the system
- Precious metals requiring recovery, items that are classified, export controlled, pilferable, or require special handling.

10. Supportability Analysis

- How design features being implemented/status, PSE determined the performance tracked

11. Additional Sustainment Planning Factors

Special topics related to sustainment

LCSP Annexes



LCSP Table of Contents

1. Introduction

- Purpose, scope, focus and objective

LCSP Annexes

Specific annexes will vary based on life-cycle phase

- Product Support Business Case Analysis
- Logistics Assessment and Corrective Action Plan
- Service Specific Requirements
- Preservation and Storage of Unique Tooling
- Core Logistics Analysis
- Source of Repair Analysis
- System Disposal Plan

Services can require additional information to meet their needs

10. Supportability Analysis

- How design features being implemented/status, PSE determined the performance tracked

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LCSP Annexes



Overview

❑ LCSP Background and Perspective

❑ Outline and Expectations

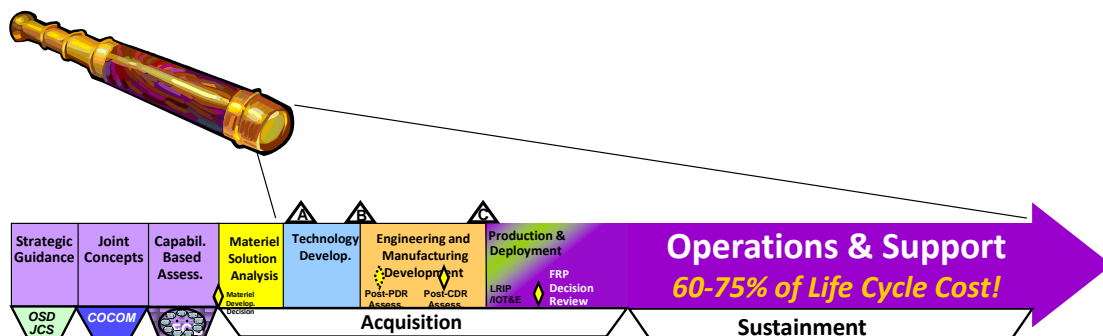
❑ LCSP Phase Emphasis

❑ LCSP and RFPs

❑ Next Steps

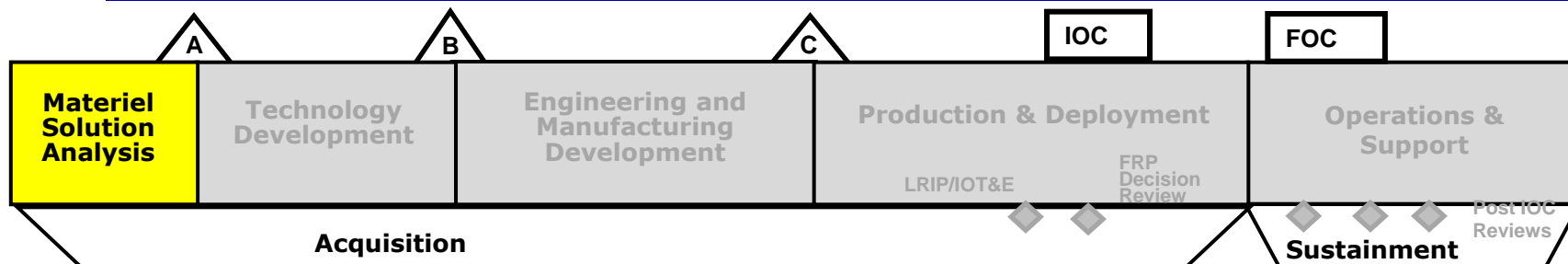
❑ Conclusion

He Who Fails To Plan, Plans To Fail





LCSP Phase Emphasis: Material Solution Analysis Phase



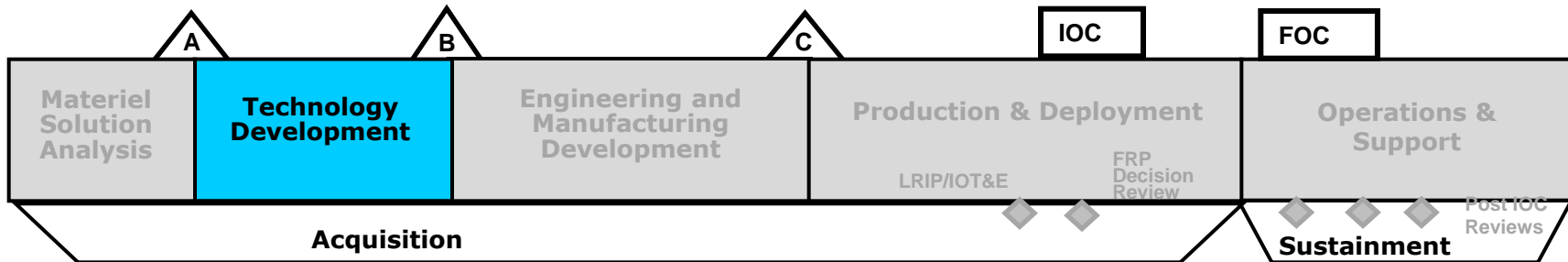
- Establish notional maintenance concept and metrics
- Identify key technologies
- Analysis process & estimating LCC drivers

LCSP Focus:

- Framing the baseline product support strategy
- Analytical process for determining:
 - Affordable metrics
 - Cost drivers and availability degraders
- Key sustainment technologies requiring development



LCSP Phase Emphasis: Technology Development Phase



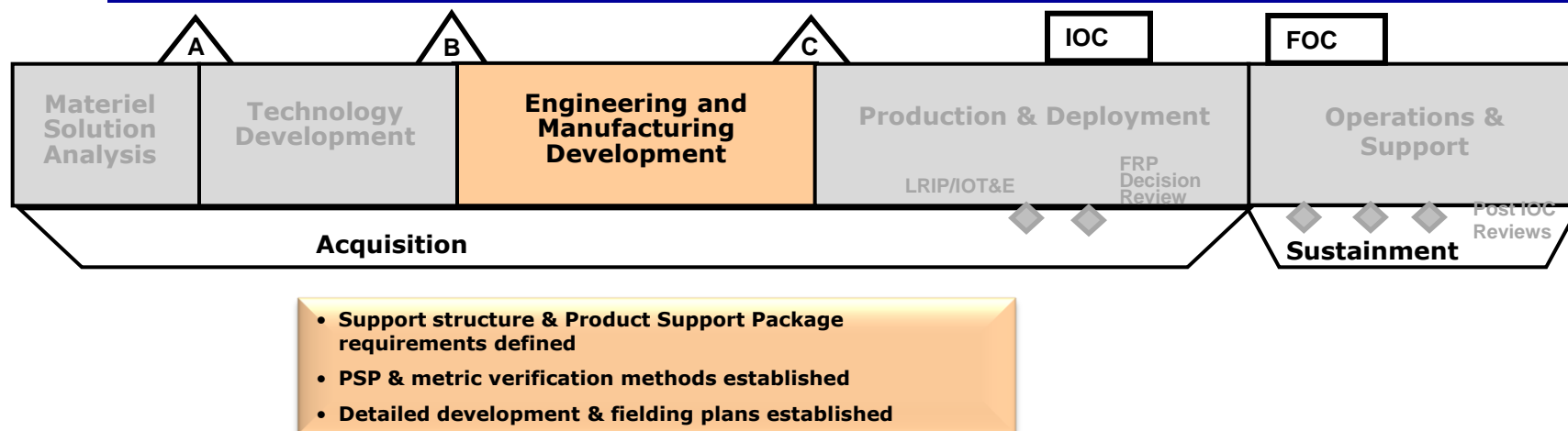
- Establish sustainment concept & execution plan framework
- Set metrics goals/thresholds & test methods

LCSP Focus

- Baseline product support strategy
- Analytical process for determining affordable metrics goals and thresholds:
 - System and subsystem level
 - Supply chain
- Ensuring the supportability design feature requirement are incorporated in the overall design specifications
 - Sustainment metrics test methods



LCSP Phase Emphasis: Engineering and Manufacturing Development Phase

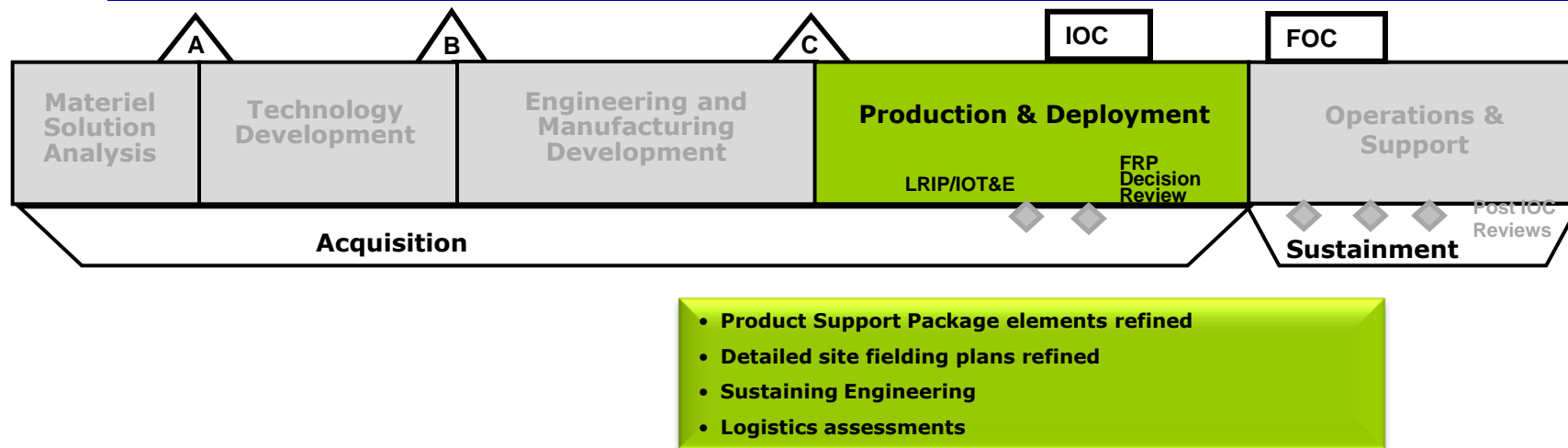


LCSP Focus

- Product Support Package (PSP) & supply chain
 - Detailed Product Support Element requirements
 - Detailed Product Support Package development & implementation
 - Performance verification methods
 - Fielding plans



LCSP Phase Emphasis: Production and Deployment Phase

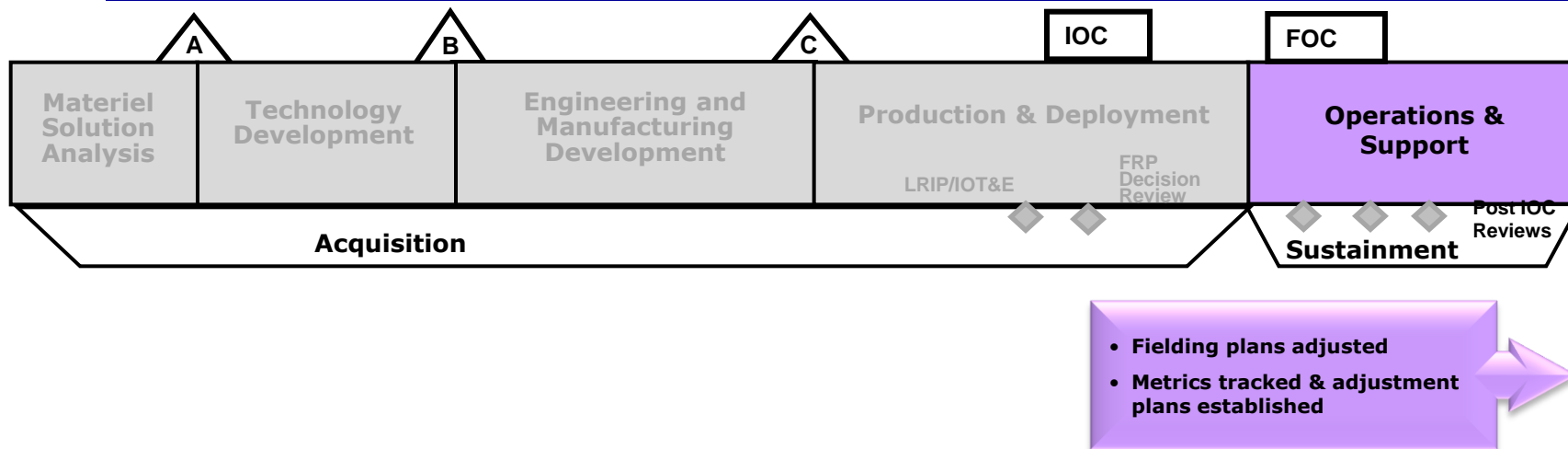


LCSP Focus

- Fielding plan details and adjustments
- Logistics assessments
 - How sustainment performance will be measured, managed, assessed and reported
- Analytical and management processes for :
 - Refining Product Support Package elements
 - Cost drivers and availability degraders



LCSP Phase Emphasis: Operations and Support Phase



LCSP Focus

- Sustaining Engineering processes for refining Product Support Package elements
- Logistics assessments on how the system and supply chain are performing
- Adjustments required for program or funding changes



Overview

- ❑ LCSP Background and Perspective

- ❑ Outline and Expectations

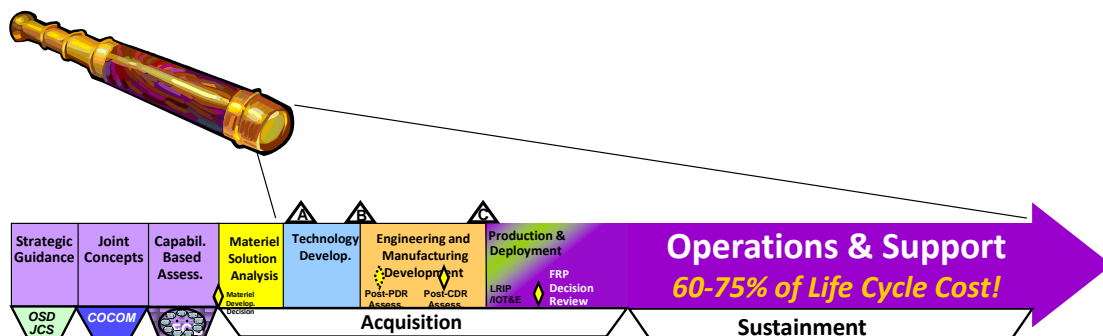
- ❑ LCSP Phase Emphasis

- ❑ LCSP and RFPs

- ❑ Next Steps

- ❑ Conclusion

He Who Fails To Plan, Plans To Fail





LCSP Informing RFPs (Key Communication Tool)

❑ Program Manager's Plan, not the Contractors

- Team means both involved
- Content varies by life-cycle phase

❑ How LCSP should be used to inform RFPs

- Government Convey the:
 - Baseline Product Support Strategy
 - Sustainment Performance Requirements
 - Government Organization
 - Regulatory/Statutory Requirements Including Core
 - Broad Schedule
- Contractor Proposal Convey
 - Approach to Accomplish Contract Requirements
 - "Design to" Requirements including Verification Method
 - Alternative Strategy – "Affordable" Requirements

❑ How LCSP should not be used in RFPs

- Fill in the Blanks





Overview

- ❑ LCSP Background and Perspective

- ❑ Outline and Expectations

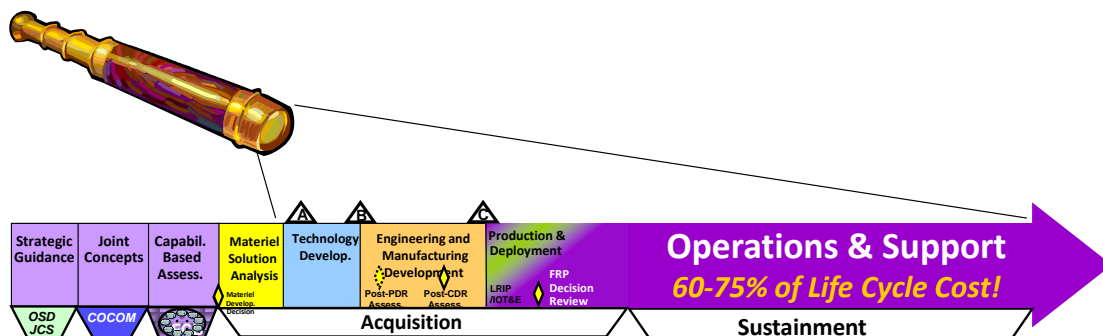
- ❑ LCSP Phase Emphasis

- ❑ LCSP and RFPs

- ❑ Next Steps

- ❑ Conclusion

He Who Fails To Plan, Plans To Fail





Next Steps

- ✓ ☒ **PDUSD AT&L review and release**
- ✓ ☒ **Integration with CLL0005** (Required for Level 3 certification)
 - Continued partnership with DAU
- ✓ ☒ **Continued Service and PSM engagement**
 - Action Officer proactive coaching of programs
 - Service collaboration to accelerate communication and oversight
 - Submission and approval process
- ☐ **Expand LCSP Website**
 - Examples
 - Expectation refinement based on lessons learned
 - Phase emphasis
 - RFP

Note:

Mr Kendall approval expected to be a one-time event...continued refinement to LCSP outline based on user input will follow the DAG update model



Refining the Coordination/Approval Process



SUBMITTED BY			
_____ Name		_____ Date	
Product Support Manager			
CONCURRENCE			
_____ Name		_____ Date	
Program Contracting Officer		Program Manager	
_____ Name		_____ Date	
Program Lead Engineer		Program Financial Manager	
_____ Name		_____ Date	
Program Executive Officer or Equivalent		Sustainment Command Representative	
COMPONENT APPROVAL (ACAT IC)			
_____ Name		_____ Date	
DoD Component Acquisition Executive (CAE) or designated representative			

MANDATED FORMAT FOR ALL
LIFE-CYCLE SUSTAINMENT PLANS

PROGRAM NAME – ACAT LEVEL

LIFE-CYCLE SUSTAINMENT PLAN
VERSION ____

SUPPORTING MILESTONE _
AND
[APPROPRIATE PHASE NAME]

[DATE]

OFFICE OF THE SECRETARY OF DEFENSE (OSD) APPROVAL

Assistant Secretary of Defense
Logistics & Materiel Readiness
(for ACAT ID Programs)

Date

[or designated LCSP approval authority]



Key Enterprise Players

- **Combat and Joint Operational Commands**
 - Operational constraints (boundaries) and what willing to pay to sustain
- **Program and Acquisition Communities**
 - Contract, Design, & Milestone Reviews
- **Financial Community**
 - Budgets tied to outcomes
- **Sustainment Community**
 - What they can expect & what the program can expect

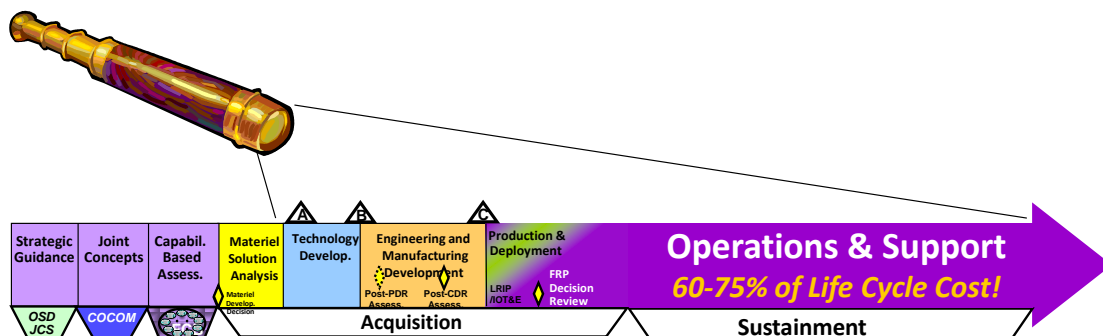




Overview

- ❑ LCSP Background and Perspective
- ❑ Outline and Expectations
- ❑ LCSP Phase Emphasis
- ❑ LCSP and RFPs
- ❑ Next Steps
- ❑ Conclusion

He Who Fails To Plan, Plans To Fail





Take Aways

- ❑ **The LCSP is used to succinctly convey the plan for formulating, implementing, and executing the sustainment strategy.**
- ❑ **A Outline is available to help programs generate their LCSPs. It provides:**
 - Structure
 - Mandated information
 - Examples
 - Data only notional examples
- ❑ **The LCSP Outline is a living document - will evolve based on lessons learned.**



LCSP Must Address

☐ The outcome-based product support strategy

- Analytical tools in determining an affordable product support strategy
- Use of competition to meet the best-value long-term outcomes for the Warfighter and Taxpayer
- Enterprise opportunities across programs and Services

☐ The sustainment related requirements

☐ The cost, schedule and management approach

- The product support arrangements

☐ The assessment approach

- Product support strategy reviews
- Adjusting resource allocations, performance requirements and Warfighter needs

Making it
affordable

Keeping it
affordable

Key element in implementing “should costs”



Questions






BACK UP



The LCSP streamlining memo


ACQUISITION,
TECHNOLOGY
AND LOGISTICS

PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE
3015 DEFENSE PENTAGON
WASHINGTON, DC 20301-3015

SEP 14 2011

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Document Streamlining – Life-Cycle Sustainment Plan (LCSP)

References: (a) USD(AT&L) memorandum, “Better Buying Power: Guidance for Obtaining Greater Efficiency and Productivity in Defense Spending,” September 14, 2010
(b) PDUUSD(AT&L) memorandum, “Document Streamlining – Program Strategies and Systems Engineering Plan,” April 20, 2011
(c) PDUUSD(AT&L) memorandum, “Document Streamlining – Program Protection Plan,” July 18, 2011

Reference (a) directed a review of the documentation required by DoDI 5000.02 in support of the acquisition process. This is the third in a series of document streamlining memoranda, following references (b) and (c). I am directing the following actions for the LCSP:

Document Streamlining: The LCSP will be streamlined consistent with the attached annotated outline. The outline is designed to be a tool for programs to effectively and affordably satisfy life-cycle sustainment requirements. This plan articulates the product support strategy, and it must be kept relevant as the program evolves through the acquisition milestones and into sustainment. The LCSP outline emphasizes early-phase sustainment requirements development and planning, focuses on cross-functional integration – most critically with systems engineering – and highlights key sustainment contract development and management activities.

LCSP Review and Approval: Per reference (b), the LCSP has been separated from the Acquisition Strategy. Every acquisition program shall develop a LCSP. The Assistant Secretary of Defense for Logistics and Materiel Readiness (ASD(L&MR)) shall approve LCSPs for all ACAT ID and USD(AT&L)-designated special interest programs for Milestone A or equivalent, each subsequent milestone, and Full-Rate Production decision. Following the system’s initial operating capability (IOC), the component acquisition executive (CAE) or designee shall approve LCSP updates, in coordination with the ASD(L&MR). Approval for ACAT IC and below LCSPs is delegated to the CAE or Component designee.

These actions constitute expected business practice and are effective immediately. The revised outline will be documented in the Defense Acquisition Guidebook and referenced in the

LCSP Review and Approval: Per the TDS/AS memorandum, the LCSP has been separated from the AS. Every acquisition program shall develop a LCSP. The Assistant Secretary of Defense for Logistics and Materiel Readiness (ASD(L&MR)) shall approve LCSPs for all ACAT ID and USD(AT&L) designated special interest programs for Milestone A or equivalent, each subsequent milestone, and Full-Rate Production decision. Following the system’s initial operating capability (IOC), the component acquisition executive (CAE) or designee shall approve LCSP updates, in coordination with the ASD(L&MR). Approval for ACAT IC and below LCSPs is delegated to the CAE or Component designee.



LCSP Outline



- 1 Introduction**
Purpose, scope, focus and objective
 - 2 Sustainment Performance Requirements**
Metrics, their values and how they will be measured over time
 - 3 Sustainment Strategy**
Strategy (maintenance & supply chain) and what drives it (design, ops, supply chain)
 - 4 Sustainment Acquisition Strategy**
Contracting strategy (Details on Sustainment related contracts expanding on Acquisition Strategy)
 - 5 Product Support Package Status**
Results from Logistics Assessments, Program & Design reviews (open issues)
 - 6 Sustainment Alignment with Regulatory/Statutory Requirements**
How being implemented
 - 7 Integrated Schedule**
Sustainment related events (major plans, Product Support Elements & site activations)
 - 8 Funding and Cost**
Product Support Elements & spending plans
 - 9 Management**
Organizational structure & staffing levels and management approach
 - 10 Supportability Analysis**
How design features being implemented/status, PSE determined the performance tracked
 - 11 Additional Sustainment Planning Factors**
Special topics related to sustainment
- LCSP Annexes**
Those required by Law, Policy or Service requirements



Product Support Package

The logistics elements and any sustainment process contracts/agreements to attain and sustain the maintenance and sustainment concepts needed for materiel availability.

- Technical Data
- Computer Resources Support
- Training Courses/Materiel
- Manpower and Personnel
- Support Equipment
- Supply Support
- Facilities
- PHS&T
- Maintenance and Repair Capabilities

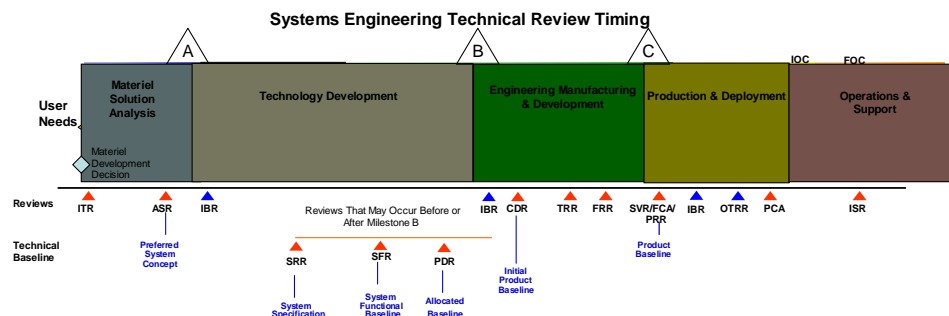
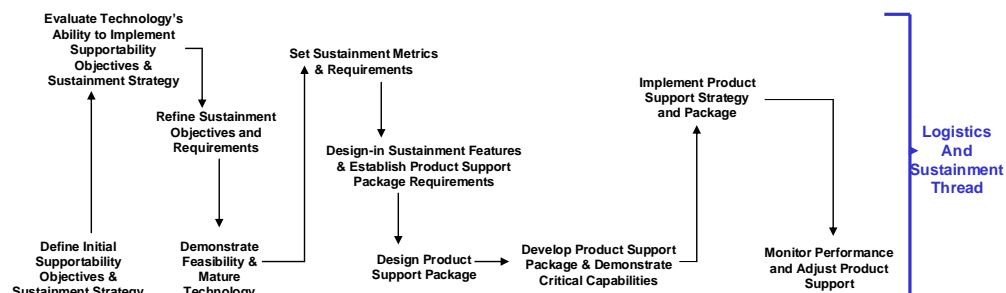
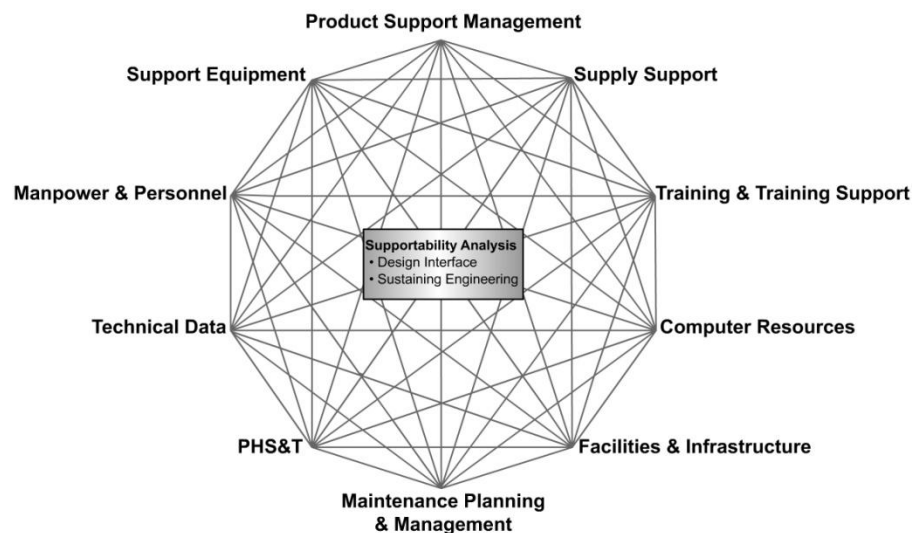
Achieved via the integrated product support elements including:

- Product Support Management
- Supportability Analysis
 - Design interface
 - Sustaining Engineering



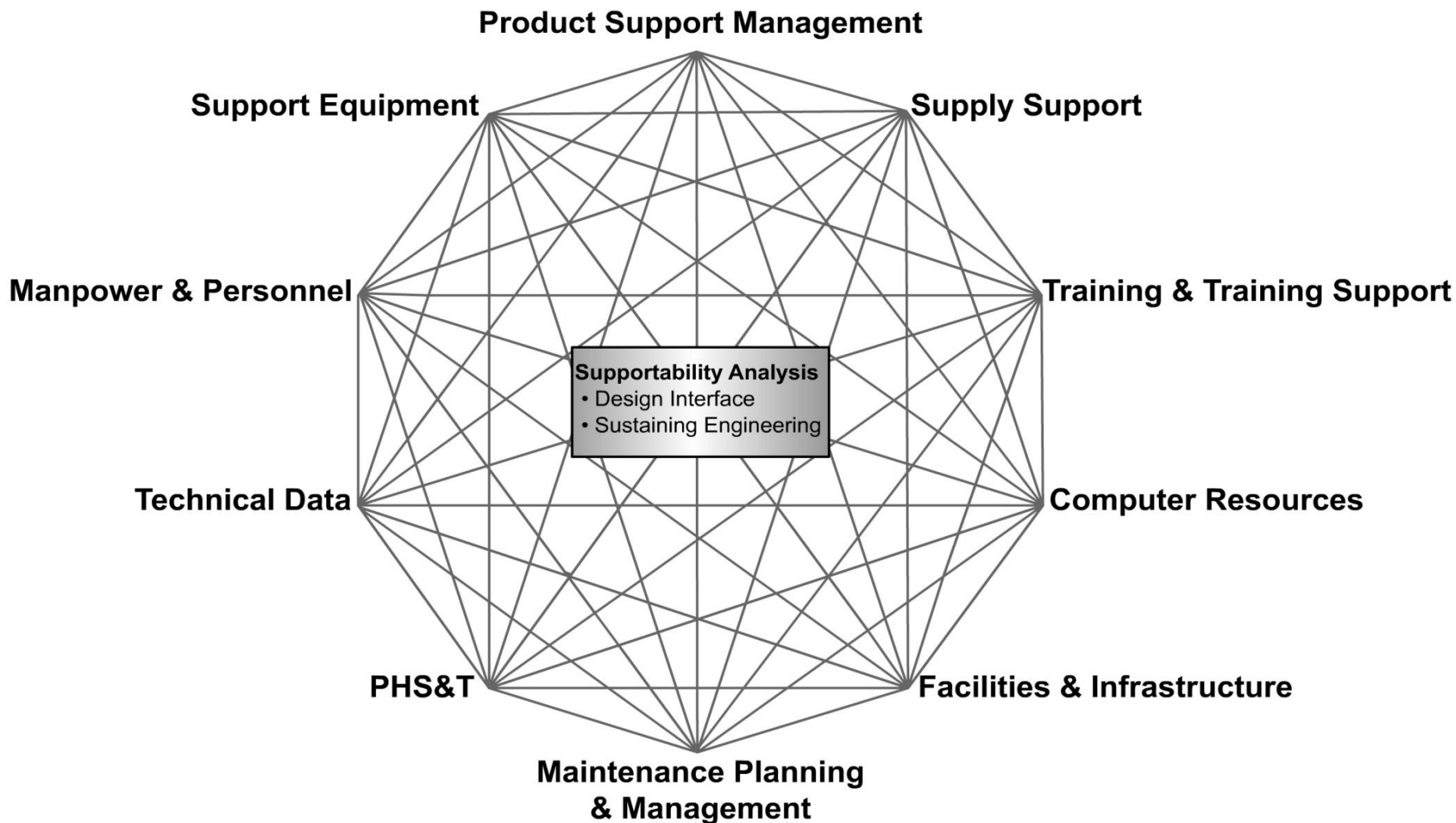
Sustainment Strategy

Achieved by integrating the product support elements to field the Product Support Package





Product Support Elements





LCSP SECTION 2

PRODUCT SUPPORT PERFORMANCE

☐ Sustainment Performance Requirements

Requirement (KPP, KSA, Derived requirement)	Documentation	Threshold / Objective	RFP/ Contract	TES / TEMP	IOC	FOC	Full Fielding
Availability (KPP)	CDD (May 24, 2014): 6.2.6.1	66% / 82%	RFP (Jun 16, 2014) Para 7.2	TEMP (2 Jun 2015): 3.2	100%	100%	72%
Reliability (KSA)	CPD (Aug 16, 2016): 6.2.6 MTBF-I: 6.3.2.1 False Alarm: 6.3.22 MTBM: 6.3.2.5	37.8% / 61.6% 2% / 1% 2 hrs / 4 hours			37% 2% 2 hrs	48.7% 2% 2 hrs	51% 2% 3 hrs
Commonality	CPD (2016) Support Equipment	<=2 new / None			2	2	2

☐ Break down of system-level metrics to the level of detail required to develop the product support package

Requirement	Lower Level Metric	Documentation	Standard or Level
Availability (KPP) Materiel Availability Operational Availability	NMCS, CWT, AWT, etc Depot Cycle Time Logistics Response Time NMCS NMCM,	Service Instruction, Command Directives, etc	
Reliability MTBCF	MTBM		



LCSP SECTION 2 (Cont'd)

Sustainment metric assessments / tests

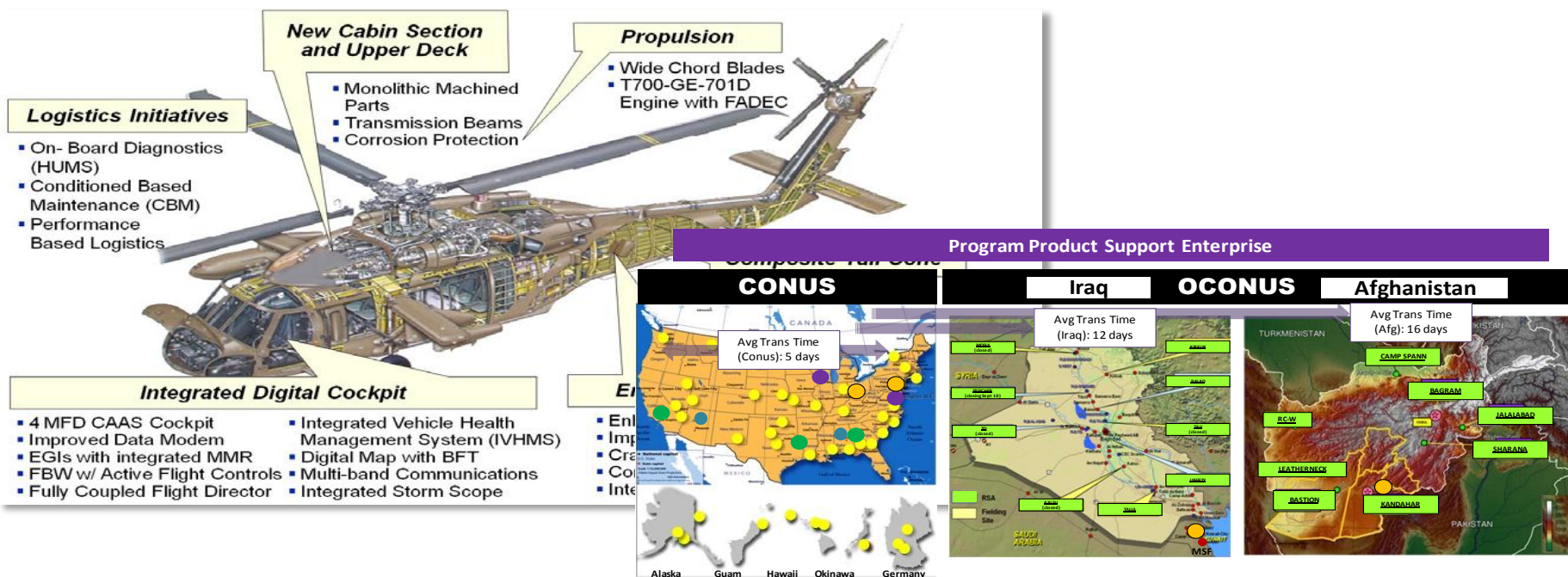
Metric / Feature	Contractual Requirements	Demonstration Schedule	Requirement / PS Elements Impacted	Performance Objective / PS Package Baseline Value	Estimated Value / IOC Estimate
Low observable coating on external surfaces	XXX	Maintainability Demo 1 st Qtr 2011	Maintenance, Training, Facilities, Publications	Repair 1 sq ft area in 4 hours	IOT&E tested value: 7 hr / 5 hours projected at IOC
ISR system Reliability of .01 failures/operating hour	XXX	Reliability Growth Curve from the SEP	Maintenance, Spares	.15 failures/operating hour	0.5 failures/operating hour and 0.25 failures/operating hour @ IOC

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LCSP SECTION 3 PRODUCT SUPPORT STRATEGY

Sustainment design features and Supply Chain performance expectations



Product Support Functional Area	Location	Planned Sustainment Performance Metrics ⁽¹⁾	Planned Contracted Support ⁽²⁾
Program Head Quarters (Product Support Management)	Quantico/Stafford, VA; Warren, MI	n/a	Mix contract and gov't
Test Facilities	Aberdeen, MD; Yuma, AZ; Huntsville, AL	Tests execution within 5 days of schedule	All gov't
Logistics Support	Albany, GA; Barstow, CA; Red River, TX; Multiple throughout CONUS and AOR	Configuration support turn around time, backlog, fill rate	Mix contract and gov't
Maintenance Depots	Albany, GA; Barstow, CA; Red River, TX	Avg Repair cycle time, Reset Time	All gov't
DLA Support	Columbus, OH, Philadelphia, PA, DDRT, DDKS, DDKA	Avg Fill Rate: Days supply: ,	All gov't
Contingency Support Activity	Afg Iraq	% ASL/PLL stocked, Zero bal w/ due out critical readiness drivers, days supply on hand,	All contract
Contingency Maintenance Depot	Kuwait	Throughput (vehicles/wk), Avg Repair cycle time (mission capability, battle damage), cost (per repair type, operation level)	All contract

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LCSP SECTION 3 (Cont'd)

Critical sustainment strategy elements (e.g. concept, roles & responsibilities, core, data rights)

Product Support Strategy

Product Support Strategy			Maintenance									Software Support/Maint		Supply Support		Transportation (PHS&T)		Supportability Analysis		Configuration Control *		Technical Data		Training		
Sub-sys**	Data Rights	Function	Level 1				Level 2				Level 3		O	C	O	C	O	C	O	C	O	C	O	C	O	C
			O-1	O-2	O-3	C	I-1	I-2	I-3	C	Depot	C														
Airframe	Unlimited	Servicing/Inspections Corrosion Control/Treatment Repair	O	O	O						NI NI			O		O		O		O		O		O		
Power Plants Engine	Unlimited	Servicing/Inspections Assemble/Disassemble Repair	O	O	O		O	O	O		NI NI NI			O		O		O		O		O		O		
APU	Negotiated License Rights Remove & Replace only	Remove & Replace Repair & Overhaul	O	O	O	P A					A	A		A	TRANSCC	P- A		A		A		A		A		
Avionics ISR	Negotiated License Rights Remove & Replace only	Inspections Functional test & adjustments Repair	O	O	O		ISR	ISR	ISR	ISR		ISR ISR ISR		ISR		ISR		ISR		ISR		ISR		ISR		
Fire Control +	Government Purpose Rights no expiration date	Inspections Functional test & adjustments Repair Diagnostics Software	O	O	O		O	O	O		Tinker Tinker Tinker		O		O		O		O		O		O			
Other	Government Purpose Rights no expiration date	Inspections Functional test & adjustments Repair	O	O	O		O	O	O		Tinker Tinker Tinker	O	O	A	TRANSCC	P- A		O		O		O		O		
Life Support	Unlimited	Inspections Functional test & adjustments Repair	O	O	O		O	O	O		Tinker Tinker Tinker	P-TBD	O	P -TBD	O	P -TBD		O		O		O		O		
Test Equipment Avionics	Unlimited	Diagnostics Software Hardware					O	O			NI	O		O		O		O		O		O		O		
Propulsion	Negotiated License Rights	Diagnostics Software Hardware					O				B	B		B		B		B		B		B		B		

** Expand as required to highlight major sustainment cost or availability drivers. Also expand as program moves towards MS C.

† Core

Maint Level Codes

O-1: Ashore Squadrons & Aviation ships
O-2: OCONUS Detachments
O-3: Detachments aboard non-aviation ships
I - 1: Major CONUS Ashore & Aviation Ships AIM/A
I - 2: Minor CONUS Ashore Sites
I - 3: OCONUS AIMDs

Organizational Codes

NI NADEP North Island
Tinker Tinker - AMC Tinker
ISR ISR Contractor TBD
Contractor A
Contractor B
TBD Contractor TBD
P Organic/Commercial Partnership

* Includes design and logistics management responsibilities

O Full organic capabilities
o Limited capabilities

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LCSP SECTION 3 (Cont'd)

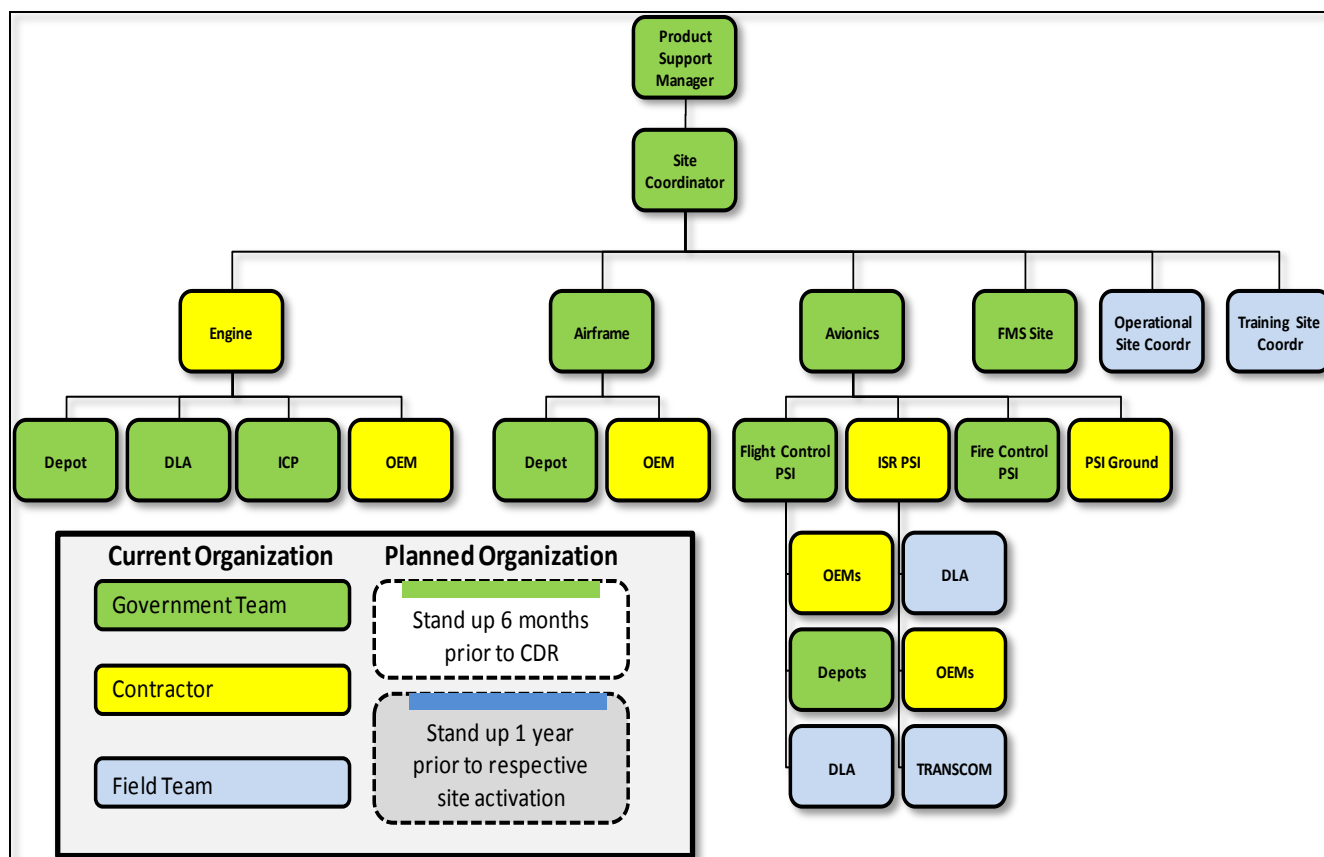
Sustainment strategy considerations and cost drivers impacting affordability

Consideration	Core Documents	Cost Driver	Product Support Element Impact/ Control
CONOPS			
Desert Operations	<ul style="list-style-type: none">System CARD: 1.2.1.x.s Environmental Conditions: 3.2; Basing & Deployment DescriptionCONOPS: OPLAN 5500, para 3.1CDD (May 24, 2014): Para 3	<ul style="list-style-type: none">Increased scheduled maintenance cycle; filter demand and filter cost	Design Interface; Supply; Technical Data; Higher Incidence of Failure Include filter system to filter to 0.1μ
DESIGN FEATURE			
Hydrazine	<ul style="list-style-type: none">System CARD: 1.2.1.x.2Environmental Conditions: 3.4.3Training: 5.0	<ul style="list-style-type: none">6 additional personnel per operating wing; specialized /dedicated equipment, facilities and IPE	Manpower & Personnel; Training; Support Equipment Facilities Specialized manning, training, & facilities / alternative power sources addressed in ongoing trade study; ECD: Jun 2013



LCSP SECTION 3 (Cont'd)

Sustainment Relationships including industry, other DoD Components, international partnerships





LCSP SECTION 4

PRODUCT SUPPORT ARRANGEMENTS

Sustainment related contracts and organic Performance Based Agreements, in place or planned, as part of the product support package

Product Support Related Contracts May 20, 2009				
Name	Organizations	Products / Timeframe	Responsibilities/Authority and Functions	Metrics & Incentives
ISR Sustainment Contract CLIN: WWW Type: FFPAW	NAVICP Bob Smith 215-xxx-xxxx Contractor A	Products Covered: <ul style="list-style-type: none">ISR AvionicsISR Ground Stations Time frame: Jan 2013 to Dec 2018 4 yr base with potential for 3 additional option years Date of signed BCA and signatory	Responsibilities: Integrate all design and product support efforts ISR equipment including configuration management. Functions: Sustainment Coverage includes <ul style="list-style-type: none">Maintenance beyond organizational levelSupply supportPublicationsTraining of organizational personnelTransportation between contractor and 1st designation	Metrics: <ul style="list-style-type: none">A_M target of 95% with min of 6% cost decrease each year<ul style="list-style-type: none">Contract extension if met

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LCSP SECTION 5

PRODUCT SUPPORT PACKAGE STATUS

- ❑ Program Review (e.g. SRR, PDR, CDR, PMR) results with open and in-work sustainment related findings

Review	Finding	Corrective Action/ECD
TRR (Feb 2014)	TRR 2014-05 LRU-3 reliability is less than half of planned; 3 circuit cards contribute to 90% of failures	Investigation into inherent design flaw or manufacturing flaw / 3QTR/2014
Logistics Assessment (Mar 2013)	LA 2013-22 Detailed schedule with critical path needs to be developed	Develop a detailed schedule NLT 30 days prior to MS-B; PSM will review, in conjunction w/LRFS; develop POA&M to resolve or mitigate critical path issues

- ❑ Product Support Package Assessment results

Product Support Element	Assessment	Discussion/Issues
Product Support Management		Sustainment BCA 6 months behind schedule
Design Interface		Sub-system reliability data analysis for impact on O&S costs in work. ECD: May 2015
Supply Support		Initial Spares funded; Cataloging actions incomplete; Warranty cost benefit analysis on-going
Maintenance Planning and Management		Core determination complete; LORA for hardware and software in-work; FMECA complete; on track to meet depot activation 4 years after IOC
PHS&T		Containerization planning complete
Technical Data		Intellectual property data rights contested by OEM; contracting and legal in negotiation with OEM; no impact on operational technical data requirements; affects competition for re-procurement
Support Equipment		Funding MIPR to ** for hardware and automatic test systems
Training & Training Support		Funding shortfall in PB14 for initial simulator; Plus up planned in POM 15
Manpower & Personnel		
Facilities and Infrastructure		MILCON shortfall in FY 14; delayed construction for First Unit Equipped
Computer Resources		
Sustaining Engineering		

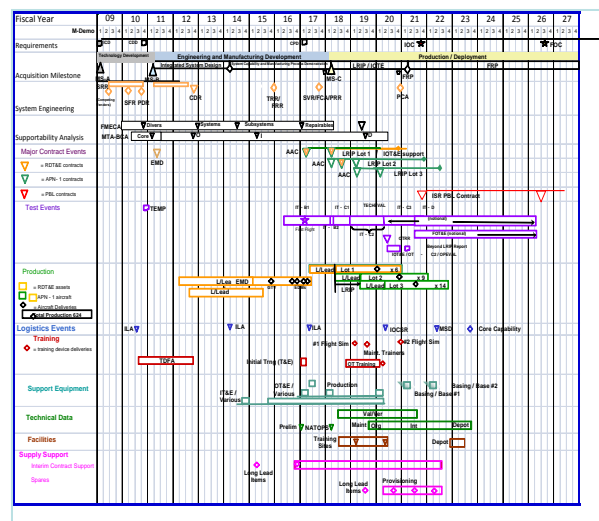
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Outline (4 of 7)

6 Sustainment Alignment with Regulatory/Statutory Requirements

7 Integrated Schedule



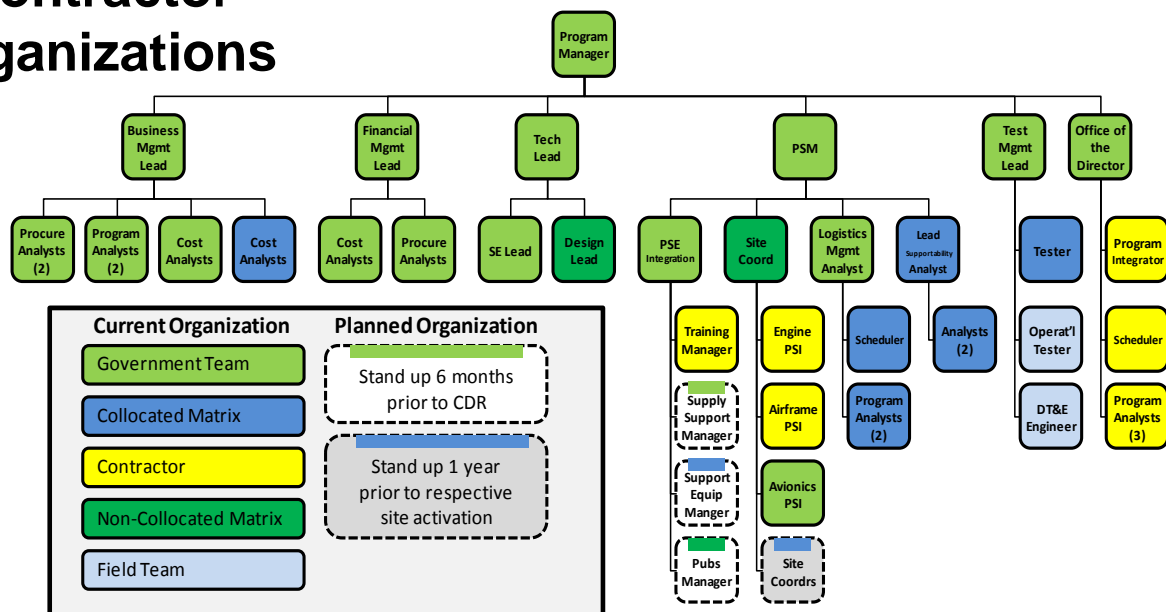
8 Funding

Program Name / Milestone	Funding (FY 09 - FY 27)										Total
	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	
Program A - Milestone 1	100	200	300	400	500	600	700	800	900	1000	5500
Program A - Milestone 2	150	250	350	450	550	650	750	850	950	1050	6000
Program A - Milestone 3	200	300	400	500	600	700	800	900	1000	1100	6500
Program A - Milestone 4	250	350	450	550	650	750	850	950	1050	1150	7000
Program A - Milestone 5	300	400	500	600	700	800	900	1000	1100	1200	7500
Program A - Milestone 6	350	450	550	650	750	850	950	1050	1150	1250	8000
Program A - Milestone 7	400	500	600	700	800	900	1000	1100	1200	1300	8500
Program A - Milestone 8	450	550	650	750	850	950	1050	1150	1250	1350	9000
Program A - Milestone 9	500	600	700	800	900	1000	1100	1200	1300	1400	9500
Program A - Milestone 10	550	650	750	850	950	1050	1150	1250	1350	1450	10000
Program A - Milestone 11	600	700	800	900	1000	1100	1200	1300	1400	1500	10500
Program A - Milestone 12	650	750	850	950	1050	1150	1250	1350	1450	1550	11000
Program A - Milestone 13	700	800	900	1000	1100	1200	1300	1400	1500	1600	11500
Program A - Milestone 14	750	850	950	1050	1150	1250	1350	1450	1550	1650	12000
Program A - Milestone 15	800	900	1000	1100	1200	1300	1400	1500	1600	1700	12500
Program A - Milestone 16	850	950	1050	1150	1250	1350	1450	1550	1650	1750	13000
Program A - Milestone 17	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	13500
Program A - Milestone 18	950	1050	1150	1250	1350	1450	1550	1650	1750	1850	14000
Program A - Milestone 19	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	14500
Program A - Milestone 20	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	15000
Program A - Milestone 21	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	15500
Program A - Milestone 22	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	16000
Program A - Milestone 23	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	16500
Program A - Milestone 24	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	17000
Program A - Milestone 25	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	17500
Program A - Milestone 26	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	18000
Program A - Milestone 27	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	18500



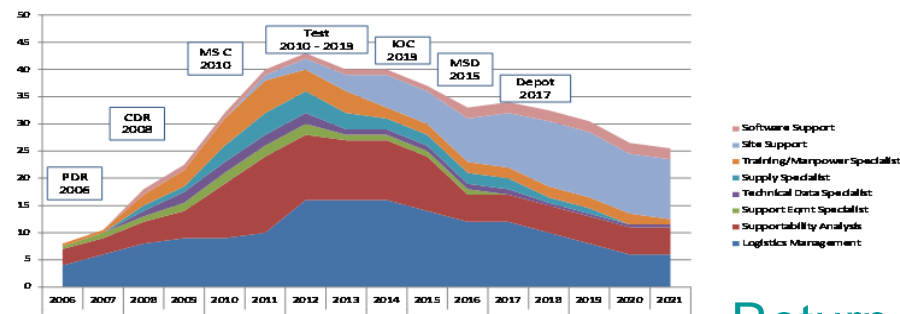
LCSP SECTION 9 MANAGEMENT

Government and Contractor Program Office Organizations



Product Support Staffing Levels and key program events

Product Support Yearly Headcount Profile (May 20, 2007 Estimate)





LCSP SECTION 9 (Cont'd)

Management approach (including sustainment risk management) and IPT Organization

Team Name	POC	Team Membership (by Function or Organization)	Team Role, Responsibility, and Authority	Products & Metrics
PS IPT	PSM Bob Smith 703-xxx-xxxx	<ul style="list-style-type: none">- Program Office<ul style="list-style-type: none">• Deputy PM• Sys Eng Lead• Financial Lead• SW Lead• Site Rep.• R&M Lead- PSIs (List)- Prod Spt IPT Leads (List)- Service Representative(s)- DoD Agency Representative(s)- Key Subcontractor or Suppliers<ul style="list-style-type: none">• Engine• XXX <p>Size: YYY</p>	<p>Role: IPT Purpose</p> <p>Responsibilities:</p> <p>Integrate all product support efforts</p> <ul style="list-style-type: none">• Team Member Responsibilities• Cost, Performance, Schedule Goals• Scope, Boundaries of IPT Responsibilities <p>Schedule and frequency of meetings</p> <p>Date of signed IPT charter and signatory</p>	<p>Products:</p> <ul style="list-style-type: none">• LCSP/LCSP Updates• IMP/IMS Inputs• Specifications• AS input <p>Metrics:</p> <ul style="list-style-type: none">• Cost<ul style="list-style-type: none">◦ Program Product Support Element costs◦ OPTAR• Schedule• Sustainment<ul style="list-style-type: none">◦ AM◦ Log Foot Print

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Risk	Rating	Driver	Mitigation	Status
------	--------	--------	------------	--------



LCSP SECTION 10

SUPPORTABILITY ANALYSIS

❑ Design Analysis - FMECA schedule & results

System	Schedule	Issues/Likelihood	Impact / comments
Airframe	Complete Update after IOT&E	<ul style="list-style-type: none">New failure modes uncovered due to projected corrosion issues around engine inlets and on wing spar.Extended range fuel tanks moved	<ul style="list-style-type: none">Ensure there are sufficient doors and panels to allow accessibility to critical areas. Ensure panels, doors, etc. are interchangeable between aircraft and designs meet support event frequencies in terms of access and its 3-dimensional access plane.Verify fuel tanks not adding stress to bulk heads during operations resulting from high "G" operations
Propulsion	3rd Qtr 06 to 4th Qtr 07	None	

❑ Reliability Growth Plan issues

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System	Planned/ De-rated Values (failures per operating hour)	Estimate at IOC	Confidence Level	Mitigation efforts
ISR systems	.01 / .15	.01 / .25	50%	<ul style="list-style-type: none">Buy additional spares and add additional I level repair capabilities at larger sites.Decision required at MS C



LCSP SECTION 10 (Cont'd)

Completed and planned Supportability trade studies

Completed Supportability Trades Jan 10, 2009				
Trade (Completed since 11/12/07)	IPT	Options Analyzed	Results	Impact
Engine level of repair 5/20/08	Engine IPT	Alternatives: <ul style="list-style-type: none">– 2 level or 3 levels of repair– Centralized 2nd level of repair or at every major site– Commercial or organic at 2nd or 3rd level Criteria: <ul style="list-style-type: none">– AM and AO– Program costs and O&S costs	<ul style="list-style-type: none">– 3 levels of maintenance with 2nd level being performed commercially at 3 central sites for hot sections– 3rd level performed by industry	<ul style="list-style-type: none">– Competitive 2nd and 3rd level performance based contract in place by IOC to cover all sustainment functions, (e.g. design, maintenance, supply, transportation, etc.).– Complete drawing set needed for competition

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LCSP SECTION 10 (Cont'd)

Technical Review participation

Review	Sustainment Participants	Sustainment Focus	Criteria
PDR 2 nd Quarter 2009	<ul style="list-style-type: none">• PSM• Supportability Analysis IPT Lead	<ul style="list-style-type: none">• Fire Control System prognostics capability• Airframe access panel locations for corrosion control	Entry <ul style="list-style-type: none">• TEMP Exit: <ul style="list-style-type: none">• Test criteria for operational testing• Updated schedule• YYY
CDR 4 th Quarter 2010	<ul style="list-style-type: none">• PSM• Supportability Analysis IPT Lead• xxx	<ul style="list-style-type: none">• XXX• XXX• XXX	Entry <ul style="list-style-type: none">• XXX Exit: <ul style="list-style-type: none">• YYY• YYY

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LCSP SECTION 10 (Cont'd)

Product Support Element Determination analysis methods & tools

Product Support Analytical Support Methods and Tools Jan 10, 2009				
Process	Schedule	Tool	Output Product	Update Timeframe
Maintainability Analysis and Prediction	XXX	MIL-HDBK-472 Maintainability Prediction Techniques supported by NALDA data for analogous systems	Maintenance Concept	xxx
Maintenance Task Analysis	XXX	YYY proprietary software PowerLog	Draft Maintenance Procedures	MS C
Repair Level Analysis considering both cost and materiel availability impact	XXX	COMPASS (updated to include A_M)	Repair vs Discard and level of repair decision	MS C
Reliability Centered Maintenance (RCM) – including its natural fall outs or related analyses	XXX	<ul style="list-style-type: none">– SAE JA 1011, RCM Evaluation– SAE JA 1012, RCM Guide– S4000M, Scheduled Maint. Analysis	<ul style="list-style-type: none">– Corrosion Control Maintenance Procedures– Condition-Based Maintenance Plus (CBM+)– Prognostics & Health Management (PHM)	MS C

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LCSP SECTION 10 (Cont'd)

Sustaining Engineering tools and monitoring methods

Sustainment Performance Data Collection and Reporting				
Tool	OPR/IPT	Metrics/Data Monitored	Feedback Mechanism	Review Timeframes
Sustainment Quad Chart	PSM	A_O , A_M , R MDT _O , MDT _M , O&S costs	Automatic updates to PEO and DASD (MR) via DAMIR. Metrics feed from NALDA GCSS	Quarterly
Post IOC Review	PSM	Logistics Assessment elements	Feedback from operators ,PSI and PSPs Summary reports forwarded to DASD (MR)	Even Years
Failure Reporting , Analysis, and Corrective Action System (FRACAS)	Sustaining Engineering IPT	A_o , A_m , R MDT _O , MDT _M , O&S costs driver metrics including but not limited to: <ul style="list-style-type: none">• XXX• XXX• XXX	NALCOMIS/NALDA data analyzed and compared to baseline values and supportability analysis tools used to update product support elements as needed	<ul style="list-style-type: none">• Critical systems effecting costs or A_M as needed• 25% of WUCs assessed every year

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